finger is the best probe, and when I have insinuated my finger down to the bone, if I find the necrosis near the other side from that in which the fistula is, I will consider the advisability of removing the sequestrum from a counter-opening on the other side, which would insure better drainage. In such a case as this, if you could absolutely promise the patient that he would recover, it would be the better plan to amputate, because an artificial limb would be much more useful than this crippled member can ever be; but the risk would be great, and we would not be justified in taking it. When I try to introduce my finger, I find considerable difficulty for, as is often the case, the tissues about a fistula have become very dense. Now I find a large piece of bone loose, and I can readily remove it without making any new incision. The operation, as you see, has been bloodless, but, now, when I remove the Esmarch, considerable hemorrhage occurs; the granulations covering the bone are very exuberant, and they bleed almost as would an artery. This is a good sign, for it shows that there is a good blood supply to the part, that will favor the reparative process; it is readily controlled by a bandage from below up the limb and elevation.

GUNSHOT INJURY—AMPUTATION.

Six weeks ago, this man, who is 30 years old, was loading a gun, when it discharged prematurely, driving a portion of the ram-rod into his hand. The presence of this foreign body was not suspected at the time, but two weeks later it was found and removed. Free drainge was procured, but the injury to the deeper structure had been very severe; the wrist joint was opened; the carpus destroyed, and even the ulnar was involved. Abscesses formed and the pus burrowed along the flexor-tendons, causing abscesses in the fingers and it also extended up the arm. There has been so much disorganization that we have decided to amputate, because we cannot hope to save the hand. When I merely shake the hand you can hear the carpus rattle. Necrosis of the bones of the wrist is very unsatisfactory to treat without operation; with the ankle it is different, because there are less bones, they are larger and there is more nutrition; while in the wrist, the bones are smaller and less abundantly nourished. Such a case, if it healed at all, would leave a stiff and useless hand, but it would be much more likely to destroy the patient by exhaustion from repeated suppuration. When to amputate is a question to decide. If it is performed within twenty-four hours after the injury it is a primary operation; at any subsequent time, it is secondary. After the receipt of the injury there is a condition of shock, when the thermometer will pursue a zig-zag course for some time, as one abscess after another forms and opens, the system being impressed by the pus formation, and relief produced by its evacuation. After three or four weeks the system becomes habituated to the discharge, the condition becomes chronic, the functions were in a fair condition, and it is now a favorable time to operate. If it be postponed, the patient is liable to become exhausted, colliquative diarrhœa may set in, and the result prove disastrous. When this man first came in his temperature was 104°. During the course of the abscesses it varied from 98 to 103°, and now, for a week, it has been nearly normal. This shows a good indication for the operation, and if we postpone it longer the pus may extend up the arm, form more abscesses, and necrosis of the radius may be added to that which we already have. Now, as to the site of operation. In this point we must be guided by the disease, and in this case I think the best point will be just below the middle of the fore-arm. Now we have a variety of methods of operation to select from: the circular; the oval; transfixion and Teale's. It will be best to make our flaps so that the scar will be on the under surface. We need not here fear retraction of the flaps, as in primary operations, because the exudation has so consolidated the parts that much of the elasticity has been lost. In this case I will not use the Esmarch, because such great pressure might crush the blood-vessels near the seat of the injury and interfere with the nutrition in the flaps; therefore I will preferably use a tourniquet. On the posterior surface of the arm I will make a long, rectangular Teale flap. Always try to have the larger vessels of the limb in the shorter flap. Now there is a triangular space on the under surface of the arm where there has been a loss of tissue, but, rather than disarticulate at the elbow, I will excise this denuded piece and stitch the edges together. You will always have more hemorrhage in secondary than in primary operations, because the small vessels which, ordinarily, are hardly perceptible, have, in the progress of the disease, become dilated, and they have also lost much of their contractility.

So that here you see we have considerable hemorrhage; that from the smaller vessels can be